

BZX85C Series

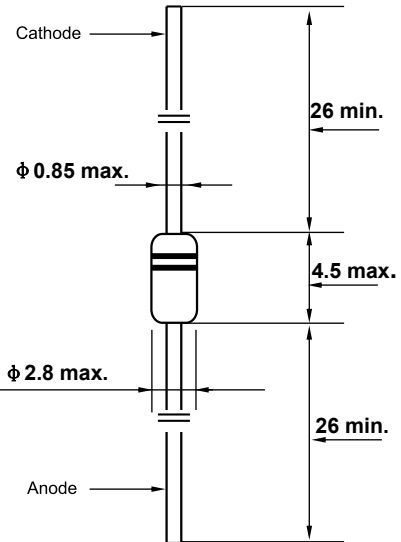
Zener Diodes

$V_Z : 2.7 \text{ to } 75\text{V}$

$P_D : 1.3\text{W}$



DO-41 Glass



Dimensions in inches and (millimeters)

Features

- ✧ Silicon planar power zener diodes.
- ✧ For use in stabilizing and clipping circuits with high power rating.
- ✧ Standard zener voltage tolerance is $\pm 5\%$
- ✧ Other tolerances are available upon request.
- ✧ **Pb / RoHS Free**

Mechanical Data

- ✧ **Case:** DO-41 Glass Case
- ✧ **Weight:** approx. 0.25g

Maximum Ratings and Thermal Characteristics

Rating at 25 °C ambient temperature unless otherwise specified

Parameter	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Maximum Forward Voltage at $I_F = 200 \text{ mA}$.	V_F	1.2	V
Power Dissipation at $T_a = 25^\circ\text{C}$	P_D	1.3 ⁽¹⁾	W
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	130 ⁽¹⁾	$^\circ\text{C/W}$
Junction temperature	T_J	175	$^\circ\text{C}$
Storage temperature range	T_S	-65 to + 200	$^\circ\text{C}$

Note:

(1) Valid provided that leads at a distance of 3/8" from case are kept at ambient temperature.

ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type Number	Nominal Zener Voltage ⁽¹⁾		Maximum Zener Impedance, f = 1 kHz			Maximum Reverse Leakage Current		Maximum DC Zener Current	Temp. coefficient of Zener Voltage $\alpha_{mvz}(\% / ^\circ\text{C})$	
	Vz @ IZT	IZT	ZzT @ IZT	Zzk @ Izk	Izk	IR @ VR		IzM ⁽²⁾	min.	max.
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)		
BZX85C2V7G	2.7	80	20	400	1.0	150	1.0	370	-0.08	-0.05
BZX85C3V0G	3.0	80	20	400	1.0	100	1.0	340	-0.08	-0.05
BZX85C3V3G	3.3	80	20	400	1.0	40	1.0	320	-0.08	-0.05
BZX85C3V6G	3.6	60	15	500	1.0	20	1.0	290	-0.08	-0.05
BZX85C3V9G	3.9	60	15	500	1.0	10	1.0	280	-0.07	-0.02
BZX85C4V3G	4.3	50	13	500	1.0	3.0	1.0	250	-0.05	0.010
BZX85C4V7G	4.7	45	13	500	1.0	3.0	1.0	215	-0.03	0.040
BZX85C5V1G	5.1	45	10	500	1.0	1.0	1.5	200	-0.01	0.040
BZX85C5V6G	5.6	45	7.0	400	1.0	1.0	2.0	190	0	0.045
BZX85C6V2G	6.2	35	4.0	300	1.0	1.0	3.0	170	0.010	0.055
BZX85C6V8G	6.8	35	3.5	300	1.0	1.0	4.0	155	0.015	0.060
BZX85C7V5G	7.5	35	3.0	200	0.5	1.0	4.5	140	0.020	0.065
BZX85C8V2G	8.2	25	5.0	200	0.5	1.0	6.2	130	0.030	0.070
BZX85C9V1G	9.1	25	5.0	200	0.5	1.0	6.8	120	0.040	0.075
BZX85C10G	10	25	7.0	200	0.5	0.5	7.5	105	0.450	0.080
BZX85C11G	11	20	8.0	300	0.5	0.5	8.2	97	0.045	0.080
BZX85C12G	12	20	9.0	350	0.5	0.5	9.1	88	0.045	0.085
BZX85C13G	13	20	10	400	0.5	0.5	10	79	0.050	0.085
BZX85C15G	15	15	10	500	0.5	0.5	11	71	0.055	0.090
BZX85C16G	16	15	15	500	0.5	0.5	12	66	0.055	0.090
BZX85C18G	18	15	20	500	0.5	0.5	13	62	0.060	0.090
BZX85C20G	20	10	24	600	0.5	0.5	15	56	0.060	0.090
BZX85C22G	22	10	25	600	0.5	0.5	16	52	0.060	0.095
BZX85C24G	24	10	25	600	0.5	0.5	18	47	0.060	0.095
BZX85C27G	27	8.0	30	750	0.25	0.5	20	41	0.060	0.095
BZX85C30G	30	8.0	30	1000	0.25	0.5	22	36	0.060	0.095
BZX85C33G	33	8.0	35	1000	0.25	0.5	24	33	0.060	0.095
BZX85C36G	36	8.0	40	1000	0.25	0.5	27	30	0.060	0.095
BZX85C39G	39	6.0	50	1000	0.25	0.5	30	28	0.060	0.095
BZX85C43G	43	6.0	50	1000	0.25	0.5	33	26	0.060	0.095
BZX85C47G	47	4.0	90	1500	0.25	0.5	36	23	0.060	0.095
BZX85C51G	51	4.0	115	1500	0.25	0.5	39	21	0.060	0.095
BZX85C56G	56	4.0	120	2000	0.25	0.5	43	19	0.060	0.095
BZX85C62G	62	4.0	125	2000	0.25	0.5	47	16	0.060	0.095
BZX85C68G	68	4.0	130	2000	0.25	0.5	51	15	0.055	0.095
BZX85C75G	75	4.0	135	2000	0.25	0.5	56	14	0.055	0.095

Notes:

- (1) Measured with pulses $t_p = 5 \text{ ms}$
- (2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case
- (3) The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.